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gleich Anmelder

Die folgenden Angaben sind den vom Anmelder eingereichten Unterlagen entnommen

Der Inhalt dieser Schrift weicht von den am Anmeldetag eingereichten Unterlagen ab

64 Windturbine für Haus und Dachkonstruktionen

DE 198 28 324 A 1

Beschreibung

Die Erfindung betrifft eine Windturbine zur Erzeugung von elektrischen Strom, mit oder ohne bestehende Dachkonstruktion. Herkömmliche Windturbinen und ähnliche Vorrichtungen zum Erzeugen von elektrischen Strom haben den Nachteil, daß sie wegen ihrer Größe und Optik nicht in Wohngebieten eingesetzt werden können.

Bisher wurden nicht alle Energiequellen zum Antrieb bestehende Windturbinen, wie Termik durch erwärmte aufsteigende Luft zum weiteren Antrieb genutzt. Die vorgegebene Dachfläche (S & W Klimahaus) ermöglicht eine effektive Ausnutzung der vorhandenen Windkraft.

Der Erfindung liegt die Aufgabe zugrunde, effektive Erzeugung von elektrischen Strom auch an sonnenarmen Tagen an denen wenig Energie durch herkömmliche Sonnenkollektoren erzeugt wird, als dann übernimmt die Windturbine die Stromversorgung auch bei Nacht oder bei bewölktem Himmel.

Die Windturbine ist erfindungsgemäß in der Weise aufgebaut, daß die Windkraft den Turbinenschaufel 1a des Turbinenrotors 1 durch einen verstellbaren Abschirmkranz 2 in Vertikale Drehung versetzt, um mit dem Stromgenerator 7 Energie zu erzeugen, zugleich ist der abgeschirmte Teil der Windturbine so geformt, daß die Windkraft durch den Einlaßschlitz 3 nach einer Luftumkehrung die Turbinenschaufel 1a antreibt. Eingebaute Ausgleichklappen 4 gleichen die Windrichtung in dem Abschirmkranz 2 aus. Windkanäle 5 in dem Abschirmkranz 2 sorgen für den thermischen Antrieb, über die Luftkanäle 10 mit den Steuerklappen 8 wird bei Betrieb arretiert in die Windrichtung gesteuert.

Die Anzahl der Turbinenschaufel 1a ist nicht festgelegt und ändert sich mit der Baugröße und der Umlaufgeschwindigkeit zwecks Minimierung auftretender Windgeräusche.

Abb. 1, Abb. 1a, Abb. 2

Die Windturbine ist schwingungsfrei durch Luftstabilisatoren 6a befestigt, Hochleistungslager sind in einer gedämmten Ölwanne 6 eingebracht, diese ist auf dem Befestigungsträger 11 mit der Dachkonstruktion 13 befestigt.

Ein geringer Teil der Luft ist durch die Windturbine mit den Ventilationskanal 14 zur Entlüftung der Dachspitze über eine Ventilationsöffnung 15 verbunden.

Die Steuerung der einströmenden Windkraft und der ausströmenden Luft ist über die Steuerklappen 12 durch einen Klappenmotor 9 geregelt.

Abb. 1

Die Dachkonstruktion 13 besteht aus einer Doppelverglasung mit einem luftdurchlässigen Träger 25 vorgesehene Befestigungsprofil 26, Dichtungsprofil 27 und Abschlußprofil 28.

Abb. 4

In der Doppelverglasung sind verstellbare Lamellen 16 in Verbindung mit einem Lamellenmotor 16a eingebaut. Der Luftfilter 17 sorgt für staubfreie und insektenfreie Luft.

Abb. 3

Der Innenraum der Dachkonstruktion 13 ist mit einer luftdurchlässigen Decke 18 versehen, so daß über den Windkanal 5 die warme, verbrauchte Luft für zusätzlichen Antrieb der Windturbine sorgt.

Abb. 5

Säulenträger 20 der, die Dachkonstruktion 13 tragen soll sind hohl und dienen auch als Installation sowie als Belüftungskanal. Rohr 21.

Steuerklappe 19 zweigt frischerwärmte Luft zum Austausch in den Innenraum ab, wodurch die Steuerklappe 22 die frische erwärmte oder gekühlte Luft durch einen Luftfilter 24 durch Erdreich geleitet abgibt Rohr 23.

Abb. 6

Abb. 1a. Windturbine in der Perspektive.

Abb. 1. Querschnitt der Windturbine in der Haus und Dachkonstruktion.

Abb. 2. Ansicht von oben der Windturbine mit dem Abschirmkranz.

Abb. 3. Luftführung durch die Doppelverglasung zur Windturbine.

Abb. 4. Luftdurchlässiger Träger in der Doppelverglasung.

Abb. 5. Durchlässige Decke im Innenraum.

Abb. 6. Luftführung zum Innenraum.

Abb. 7. Aufbau der Haus und Dachkonstruktion.

Abb. 8. Vollständige S & W Klimahaus als Haus und Dachkonstruktion.

Abb. 9. Zwei luftdurchlässiger Träger mit Montagezubehör.

Patentansprüche

1. Windturbine zur Erzeugung von elektrischen Strom mit steuerbarem Lufteinlaß insbesondere für vorgegebene Haus und Dachkonstruktion S & W Klimahaus und/oder bestehenden Dachkonstruktionen, dadurch gekennzeichnet, daß die Windturbine aus einem Turbinenrotor (1) verbunden mit dem Stromgenerator (7) und steuerbaren Abschirmkranz (2) mit zwei Windkanälen (5) und einen Einlaßschlitz (3) zur Luftumkehrung mit Ausgleichklappen (4) zusammengesetzt ist, die vorgegebenen Luftführung durch die Oberfläche der Haus und Dachkonstruktion und der Luftführung in der Doppelverglasung mit einem luftdurchlässigen Trägern versehen ist.

2. Windturbine nach Anspruch 1, dadurch gekennzeichnet, daß die Windturbine in eine Haus und Dachkonstruktion in Pyramidenform mit geformten Säulenträger und den zugehörigen Haltevorrichtung, Luftstabilisatoren (6a), Ölwanne (6), Steuerklappen (12), Klappenmotor (9) mit den dazugehörigen Luftkanälen (10) eingebaut ist.

3. Windturbine nach Anspruch 1, dadurch gekennzeichnet, daß die Windturbine über die Luftkanäle (10), Windkanäle (5) durch die Doppelverglasung, in der die Lamellen (16) mit dem Lamellenmotor (16a), und Luftfilter 17 eingebracht sind, durch erwärmte Luft verbunden ist.

4. Windturbine nach Anspruch 1, dadurch gekennzeichnet, daß in die Windturbine einen Ventilationskanal (14) mit den dazu gehörigen Öffnungen eingebracht ist.

5. Windturbine nach Anspruch 3, dadurch gekennzeichnet, daß die Doppelverglasung mit dem luftdurchlässigen Träger, Flachträger und den Montagezubehör zum unverwechselbaren Aneinanderfügen der Befestigungsteile versehen sind.

Hierzu 8 Seite(n) Zeichnungen

Abb.1a

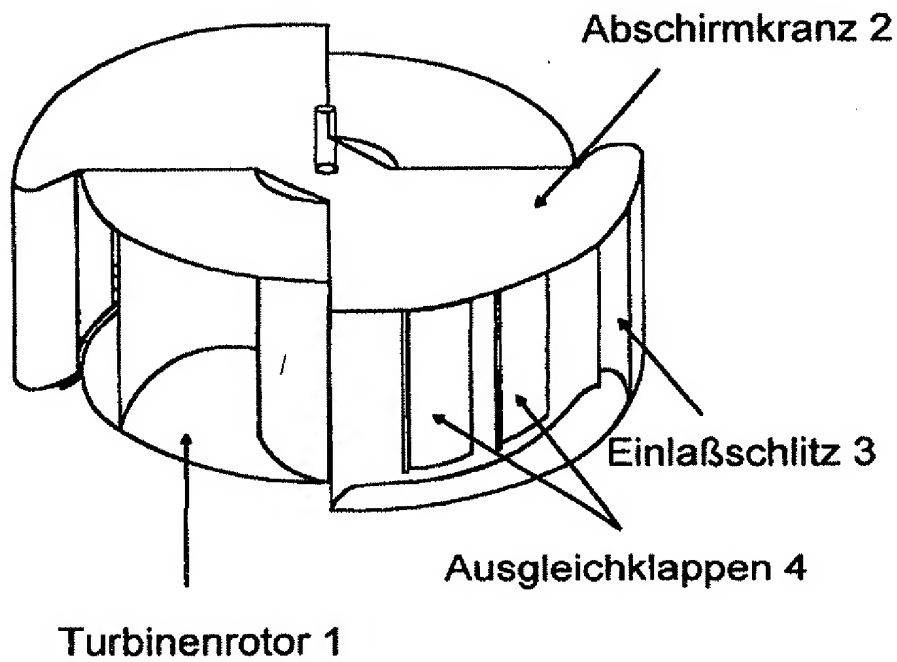


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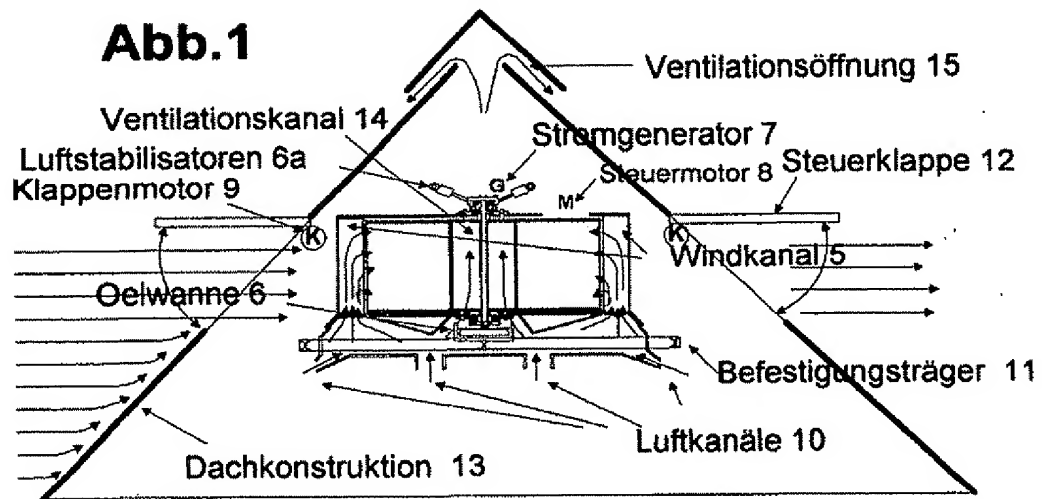


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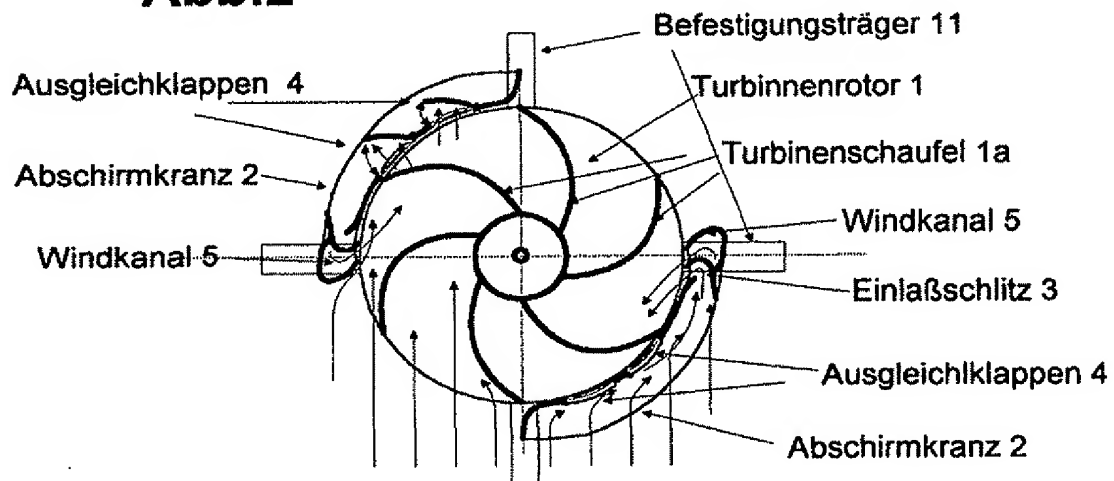


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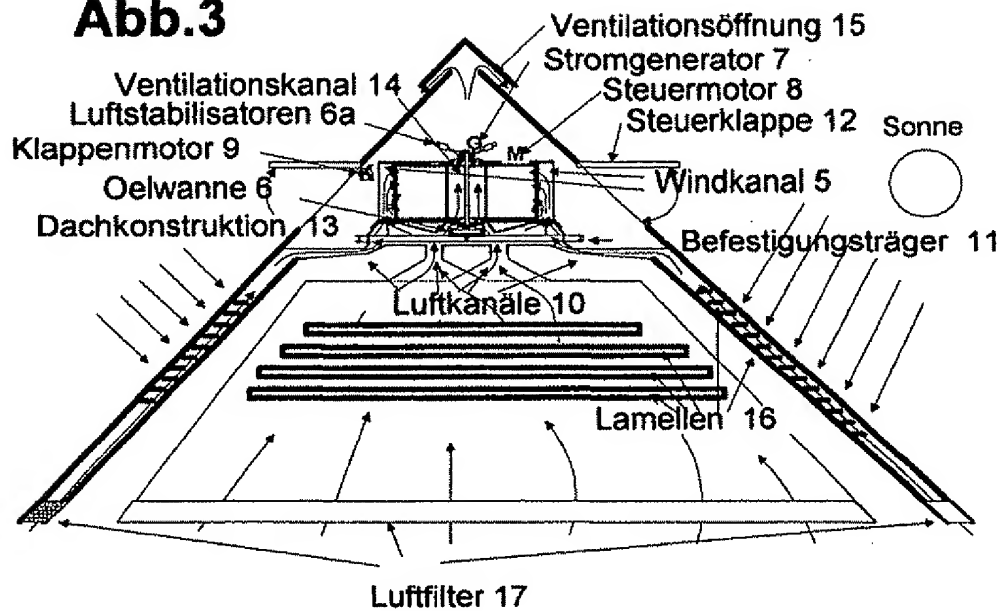


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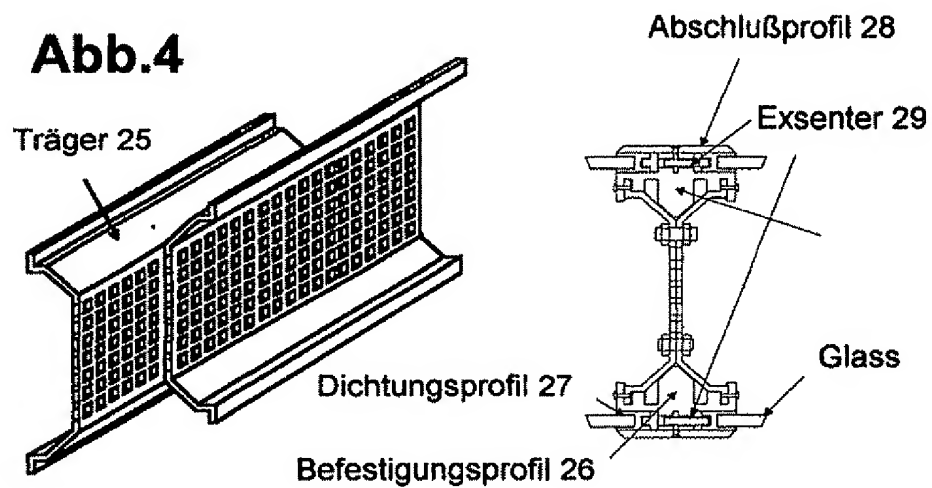


Abb.5

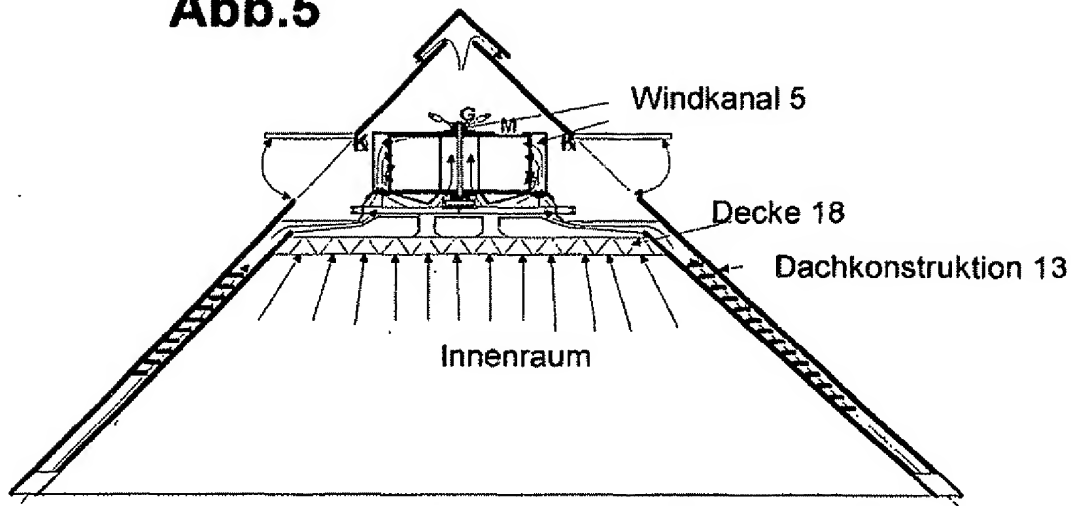


Abb.6

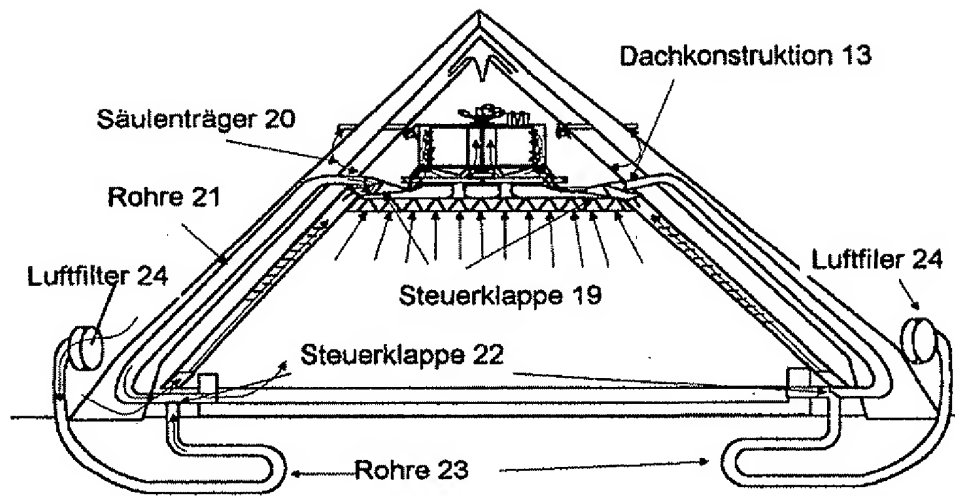
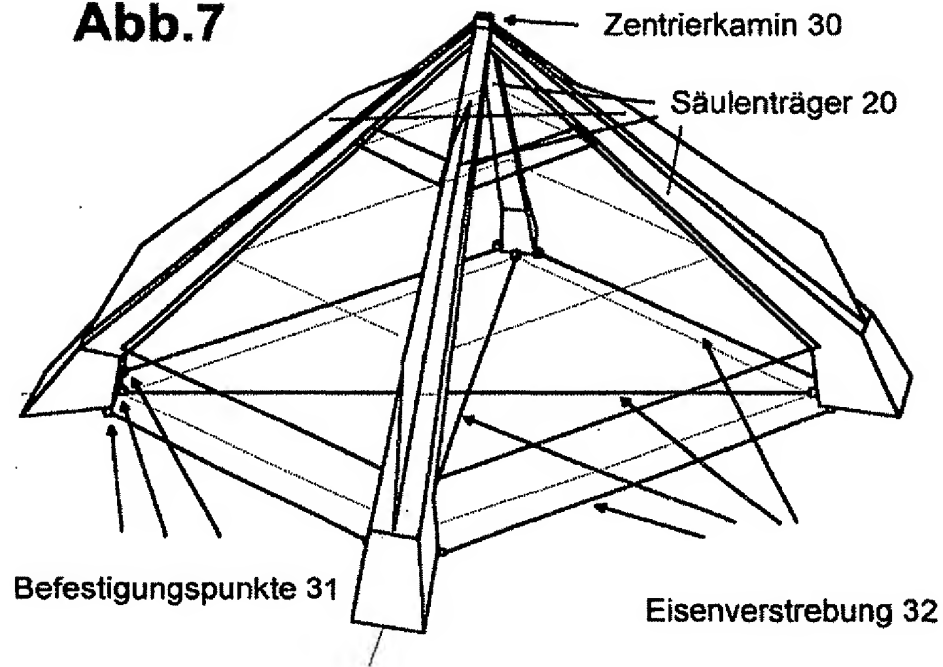
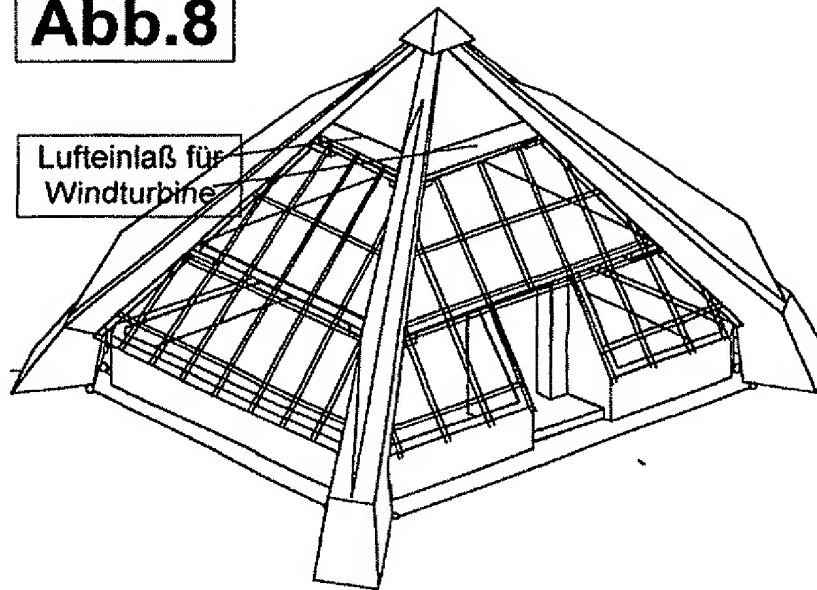


Abb.7

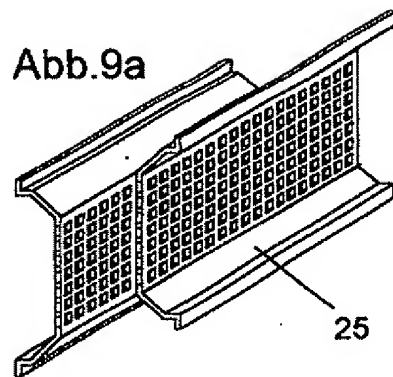


**Aufbau der S & W Klimahaus als Haus und
Dachkonstruktion**

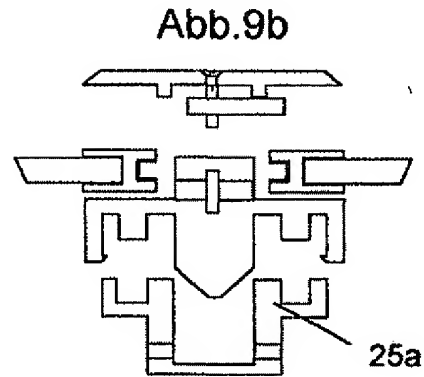
Abb.8



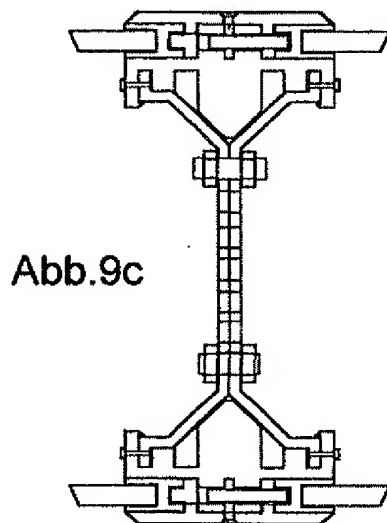
Vollständiges S & W Klima als Haus- und Dachkonstruktion



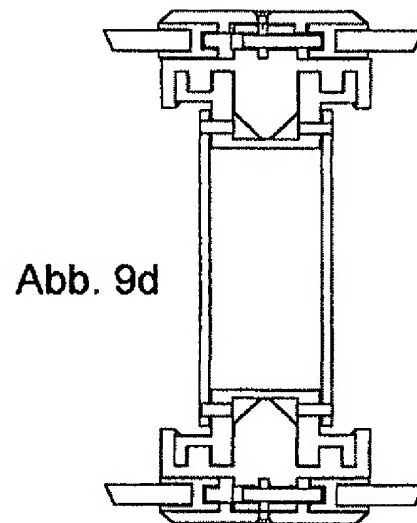
Versätze Montage der Träger



Montage Zubehör



Luftdurchlässiger Träger



Flachträger

PUB-NO: DE019828324A1

DOCUMENT-IDENTIFIER: DE 19828324 A1

TITLE: Wind turbine installed in pyramid-shaped roof of house

PUBN-DATE: December 30, 1999

INVENTOR-INFORMATION:

NAME	COUNTRY
BASTIAN, HEINRICH	DE

ASSIGNEE-INFORMATION:

NAME	COUNTRY
BASTIAN HEINRICH	DE

APPL-NO: DE19828324

APPL-DATE: June 25, 1998

PRIORITY-DATA: DE19828324A (June 25, 1998)

INT-CL (IPC): E04H001/00, E04D013/18 , E04H009/02 ,
F03D009/00

EUR-CL (EPC): F03D011/04

ABSTRACT:

The turbine rotor (1) is of the vertical rotor type, with curved

blades

which are convex in the direction of rotation. The **rotor** (1) is partially surrounded by a hood (2) which has guide **blades** (4) on the side facing towards

the **wind** and the side facing away from the **wind**. The **blades** cover the

advancing sides of the **rotor**, and the retreating sides are left free.

Shutters

in the sides of the pyramidal roof may be opened to let the **wind** flow through.



Result Page

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The invention concerns a Windturbine for the production of electric current, with or without existing roof structure. Conventional Windturbinen and similar devices to produce from electric current have the disadvantage that they cannot be used because of their size and optics in populated areas.

So far not all energy sources were used to the drive existing Windturbinen, like Termik by warmed up ascending air to the further drive. The given roof area (S & W climatic house) makes an effective utilization for the existing wind force possible.

The invention is the basis the task, effective production by electric current also on sun-poor days at those little energy by conventional solar collectors is produced, as then takes over the Windturbine the current supply also at night or with cloudy sky.

The Windturbine is according to invention in the way constructed that the wind force shifts the turbine blade 1a of the Turbinenrotors 1 by an adjustable shielding ring 2 into vertical turn, in order to produce with the current generator 7 energy, at the same time is the shielded part of the Windturbine in such a way formed that the wind force propels the turbine blade 1a by the Einlassschlitz 3 after an air reversal inserted balance flaps 4 adjusts the wind direction in the shielding ring 2. Wind tunnels 5 in the shielding ring 2 ensure for the thermal drive, over the air ducts 10 with the tax engine 8 with enterprise locked into the wind direction are steered.

The number of the turbine blade 1a is not and changes with the size and the peripheral speed for minimization of auftretender wind noises. Fig. 1, fig. 1a, fig. 2

The Windturbine is fastened vibration-free by air stabilizers 6a, high speed camps is in a dammed oil pan 6 brought in, these is fastened on the attachment carrier 11 with the roof structure 13.

A small part of air is connected by the Windturbine with the ventilation channel 14 for the exhaust of the roof point by a Ventilationsöffnung 15.

The controlling of the wind force flowing in and leaking out air is regulated over the tax flaps 12 by a flap engine 9. Fig. 1

The roof structure 13 consists of is a double glazing with a air-permeable carrier 25 intended attachment profile 26, sealing profile 27 and end section 28. Fig. 4

In the double glazing adjustable lamellas 16 built in connection with a sliding-vane motor 16a are. The air cleaner 17 provides for dust free ones and insect-free air. Fig. 3

The interior of the roof structure 13 is provided with a air-permeable cover 18, so that over the wind tunnel 5 warm, used up air provides for additional drive of the Windturbine. Fig. 5

Column carrier 20 that, the roof structure 13 to carry is to serve is hollow and also as installation as well as ventilation channel. Pipe 21.

▲ top Tax flap 19 branches fresh-warmed air for the change into the interior, whereby the tax flap 22 delivers fresh warmed up or cooled air by an air cleaner 24 by soil led pipe 23. Fig. 6

Fig. 1a. Windturbine in the perspective.

Fig. 1. Cross section of the Windturbine in that house and roof structure.

Fig. 2. Opinion from above the Windturbine with the shielding ring.

Fig. 3. Air circulation by the double glazing to the Windturbine.

Fig. 4. Air-permeable carrier in the double glazing.

Fig. 5. Permeable cover in the interior.

Fig. 6. Air circulation to the interior.

Fig. 7. Structure that house and roof structure.

Fig. 8. Complete S & W climatic house as house and roof structure.

Fig. 9. Two air-permeable carrier with assembly accessories.



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So far not all energy sources were used to the drive existing Windturbinen, like Termik by warmed up ascending air to the further drive. The given roof area (S & W climatic house) makes an effective utilization for the existing wind force possible.

The invention is the basis the task, effective production by electric current also on sun-poor days at those little energy by conventional solar collectors is produced, as then takes over the Windturbine the current supply also at night or with cloudy sky.

The Windturbine is according to invention in the way constructed that the wind force shifts the turbine blade 1a of the Turbinenrotors 1 by an adjustable shielding ring 2 into vertical turn, in order to produce with the current generator 7 energy, at the same time is the shielded part of the Windturbine in such a way formed that the wind force propels the turbine blade 1a by the Einlassschlitz 3 after an air reversal inserted balance flaps 4 adjusts the wind direction in the shielding ring 2. Wind tunnels 5 in the shielding ring 2 ensure for the thermal drive, over the air ducts 10 with the tax engine 8 with enterprise locked into the wind direction are steered.

The number of the turbine blade 1a is not and changes with the size and the peripheral speed for minimization of auftretener wind noises. Fig. 1, fig. 1a, fig. 2

The Windturbine is fastened vibration-free by air stabilizers 6a, high speed camps is in a dammed oil pan 6 brought in, these is fastened on the attachment carrier 11 with the roof structure 13.

A small part of air is connected by the Windturbine with the ventilation channel 14 for the exhaust of the roof point by a Ventilationsöffnung 15.

The controlling of the wind force flowing in and leaking out air is regulated over the tax flaps 12 by a flap engine 9. Fig. 1

The roof structure 13 consists of is a double glazing with a air-permeable carrier 25 intended attachment profile 26, sealing profile 27 and end section 28. Fig. 4

In the double glazing adjustable lamellas 16 built in connection with a sliding-vane motor 16a are. The air cleaner 17 provides for dust free ones and insect-free air. Fig. 3

The interior of the roof structure 13 is provided with a air-permeable cover 18, so that over the wind tunnel 5 warm, used up air provides for additional drive of the Windturbine. Fig. 5

Column carrier 20 that, the roof structure 13 to carry is to serve is hollow and also as installation as well as ventilation channel. Pipe 21.

▲ top Tax flap 19 branches fresh-warmed air for the change into the interior, whereby the tax flap 22 delivers fresh warmed up or cooled air by an air cleaner 24 by soll led pipe 23. Fig. 6

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1. Windturbine for the production house and roof structure S & W climatic house and/or existing roof structures, by, the fact given by electric current marked by controllable air intake in particular for that the Windturbine is compound from a Turbinenrotor (1) connected with the current generator (7) and controllable shielding ring (2) with two wind tunnels (5) and a Einlassschlitz (3) for air reversal with balance flaps (4), which given air circulation by the surface that is provided with air-permeable carriers house and roof structure and the air circulation in the double glazing.
2. Windturbine according to requirement 1, by the fact characterized that the Windturbine is built to oil pan (6) into house and roof structure into pyramid form with formed column carrier and the associated holding device, air stabilizers (6a), tax flaps (12), flap engine (9) with the pertinent air ducts (10).
3. Windturbine according to requirement 1, by it characterized that the Windturbine over the air ducts (10), wind tunnels (5) are brought in for air cleaner 17 by the double glazing, in that the lamellas (16) with the sliding-vane motor (16a), and, by warmed up air connected is.
4. Windturbine according to requirement 1, by the fact characterized that into the Windturbine a ventilation channel (14) with the openings due to it is brought
5. Windturbine according to requirement 3, by the fact characterized that the double glazing with the air-permeable carrier, flat carriers and assembly accessories for unmistakable joining of the mounting elements are provided.

Search Notes

Application/Control No.

10/559,589

Examiner

Joseph Waks

Applicant(s)/Patent under
Reexamination

RICHARDS ET AL.

Art Unit

2834

SEARCHED

Class	Subclass	Date	Examiner
290	55	8/7/2007	JW

INTERFERENCE SEARCHED

Class	Subclass	Date	Examiner

**SEARCH NOTES
(INCLUDING SEARCH STRATEGY)**

	DATE	EXMR
EAST text search	8/7/2007	JW



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BIB DATA SHEET

CONFIRMATION NO. 2717

SERIAL NUMBER 10/559,589	FILING or 371(c) DATE 05/09/2006 RULE	CLASS 310	GROUP ART UNIT 2834	ATTORNEY DOCKET NO. 1600-000005/US/NP
APPLICANTS Malcolm Colin Richards, Nottingham, UNITED KINGDOM; Bernard John Sheridan, Newark, GBN, UNITED KINGDOM, Deceased; Margaret Sheridan, Newark, GBN, UNITED KINGDOM, Legal Representative; Anthony Whitham, Nottingham, GBN, UNITED KINGDOM;				
** CONTINUING DATA ***** This application is a 371 of PCT/GB04/02352 06/01/2004				
** FOREIGN APPLICATIONS ***** UNITED KINGDOM 0312903.8 06/05/2003				
** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** ** SMALL ENTITY ** 03/01/2007				
Foreign Priority claimed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 35 USC 119(a-d) conditions met <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Verified and Acknowledged <u>JOSEPH WAKS/</u> Examiner's Signature	<input type="checkbox"/> Met after Allowance Initials	STATE OR COUNTRY UNITED KINGDOM	SHEETS DRAWINGS 12	TOTAL CLAIMS 16
INDEPENDENT CLAIMS 1				
ADDRESS HARNESS, DICKEY, & PIERCE, P.L.C 7700 BONHOMME, STE 400 ST. LOUIS, MO 63105 UNITED STATES				
TITLE Generator				
FILING FEE RECEIVED 515	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit	

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	3	("3697765" "4061926" "6172429").PN.	US-PGPUB; USPAT; USOCR; FPRS	OR	OFF	2007/08/06 10:15
S2	2	("20030006614" "6249058").PN.	US-PGPUB; USPAT; USOCR; FPRS	OR	OFF	2007/08/06 10:18
S3	3	("3697765" "4061926" "6172429").PN.	US-PGPUB; USPAT; USOCR; FPRS	OR	OFF	2007/08/06 10:19
S4	2	("20030006614" "6249058").PN.	US-PGPUB; USPAT; USOCR; FPRS	OR	OFF	2007/08/06 10:19
S5	5	S1 S2 S3 S4	US-PGPUB; USPAT; USOCR; FPRS	OR	OFF	2007/08/06 11:06
S6	1511	(malcolm m) near2 richards	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2007/08/06 10:26
S8	192	(bernard b) near2 sheridan	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2007/08/06 10:27
S9	4	S6 and S8	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2007/08/06 10:27
S10	0	"22888642"	EPO; DERWENT	OR	OFF	2007/08/06 11:13
S11	4	((("5506453") or ("4278896") or ("4061926") or ("4057270")).PN.	USPAT	OR	OFF	2007/08/06 13:06
S13	2564064	wind nea3 (mill turbine generator wheel motor)	US-PGPUB; USPAT; USOCR; FPRS	OR	OFF	2007/08/06 15:27

EAST Search History

S14	831059	impeller rotor blade vane	US-PGPUB; USPAT; USOCR; FPRS	OR	ON	2007/08/06 15:27
S15	490032	S13 and S14	US-PGPUB; USPAT; USOCR; FPRS	OR	ON	2007/08/06 13:08
S16	111346	"290"/\$.ccls. "415"/\$.ccls. "416"/\$. ccls.	US-PGPUB; USPAT; USOCR; FPRS	OR	ON	2007/08/06 13:09
S17	37001	S15 and S16	US-PGPUB; USPAT; USOCR; FPRS	OR	ON	2007/08/06 13:10
S18	28220	S17 and (axis axial axially)	US-PGPUB; USPAT; USOCR; FPRS	OR	ON	2007/08/06 15:27
S19	109634	air adj (in inlet)	US-PGPUB; USPAT; USOCR; FPRS	OR	ON	2007/08/06 15:28
S20	69548	air adj (out outlet)	US-PGPUB; USPAT; USOCR; FPRS	OR	ON	2007/08/06 15:28
S21	807	S18 and S19 and S20	US-PGPUB; USPAT; USOCR; FPRS	OR	ON	2007/08/06 13:12
S22	29913	S17 and (axis radial horizontal horizontally radially)	US-PGPUB; USPAT; USOCR; FPRS	OR	ON	2007/08/06 15:30
S23	3395	S22 not S18	US-PGPUB; USPAT; USOCR; FPRS	OR	ON	2007/08/06 14:08
S24	115	S23 and S19 and S20	US-PGPUB; USPAT; USOCR; FPRS	OR	ON	2007/08/06 14:12
S25	1124	(290/55).CCLS.	US-PGPUB; USPAT; USOCR; FPRS	OR	OFF	2007/08/06 14:12

EAST Search History

S26	872	S25 and S14	US-PGPUB; USPAT; USOCR; FPRS	OR	ON	2007/08/06 14:13
S27	845	S26 not S21 not S24	US-PGPUB; USPAT; USOCR; FPRS	OR	ON	2007/08/06 14:13
S28	227252	wind nea3 (mill turbine generator wheel motor)	EPO	OR	OFF	2007/08/06 17:22
S29	61405	impeller rotor blade vane	EPO	OR	ON	2007/08/06 16:00
S30	21237	S28 and S29	EPO	OR	ON	2007/08/06 15:27
S31	5489	S30 and (axis axial axially)	EPO	OR	ON	2007/08/06 15:28
S32	4548	air adj (in inlet)	EPO	OR	ON	2007/08/06 17:23
S33	3403	air adj (out outlet)	EPO	OR	ON	2007/08/06 17:23
S34	16	S31 and S32 and S33	EPO	OR	ON	2007/08/06 15:32
S36	5779	S30 and (axis radial horizontal horizontally radially)	EPO	OR	ON	2007/08/06 15:31
S37	1921	S36 not S31	EPO	OR	ON	2007/08/06 15:31
S38	5	S37 and S32 and S33	EPO	OR	ON	2007/08/06 15:33
S39	742	f03d009/00	EPO	OR	ON	2007/08/06 17:21
S40	645	S39 and S28	EPO	OR	OFF	2007/08/06 15:34
S41	283	S40 and S29	EPO	OR	ON	2007/08/06 15:34
S42	1131	f03d009/00	JPO	OR	ON	2007/08/06 15:59
S43	853975	wind nea3 (mill turbine generator wheel motor)	JPO	OR	OFF	2007/08/06 15:59
S44	196963	impeller rotor blade vane	JPO	OR	ON	2007/08/06 16:00
S45	442	S42 and S43 and S44	JPO	OR	ON	2007/08/06 16:00
S46	8205	air adj (in Inlet)	JPO	OR	ON	2007/08/06 16:00
S47	8016	air adj (out outlet)	JPO	OR	ON	2007/08/06 16:01
S48	3	S45 and S46 and S47	JPO	OR	ON	2007/08/06 16:02
S49	4	S45 and S46	JPO	OR	ON	2007/08/06 16:02
S50	5	S45 and S47	JPO	OR	ON	2007/08/06 16:03
S51	436	S45 not S48 not S49 not S50	JPO	OR	ON	2007/08/06 16:04
S52	3008	f03d009/00	DERWENT	OR	ON	2007/08/06 17:21
S53	1804587	wind nea3 (mill turbine generator wheel motor)	DERWENT	OR	OFF	2007/08/06 17:22
S54	2834	S52 and S53	DERWENT	OR	OFF	2007/08/06 17:22
S55	29824	air adj (in Inlet)	DERWENT	OR	ON	2007/08/06 17:23
S56	18290	air adj (out outlet)	DERWENT	OR	ON	2007/08/06 17:23

EAST Search History

S57	12	S54 and S55 and S56	DERWENT	OR	ON	2007/08/06 17:23
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